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Mazdoor Kisan Shakti Sangathan

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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11694-2 (1986): single-lock automatic couplings for push tows for inland navigation, Part 2 Type A couplings [TED 18: Inland, Harbour Crafts and Fishing Vessels]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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Indian Standard

**SPECIFICATION FOR
SINGLE - LOCK AUTOMATIC COUPLINGS FOR
PUSH TOWS FOR INLAND NAVIGATION
PART 2 TYPE A COUPLINGS**

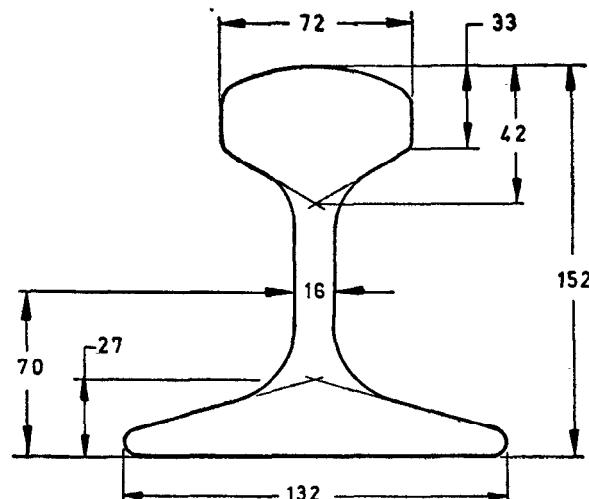
1. Scope

1.1 This standard specifies the main dimensions and other requirements of Type A single-lock automatic couplings intended for a bow-to-stern connection of inland vessels in push tows, navigating in waters with a wave height of not more than 2 m.

1.2 This standard does not cover side couplings.

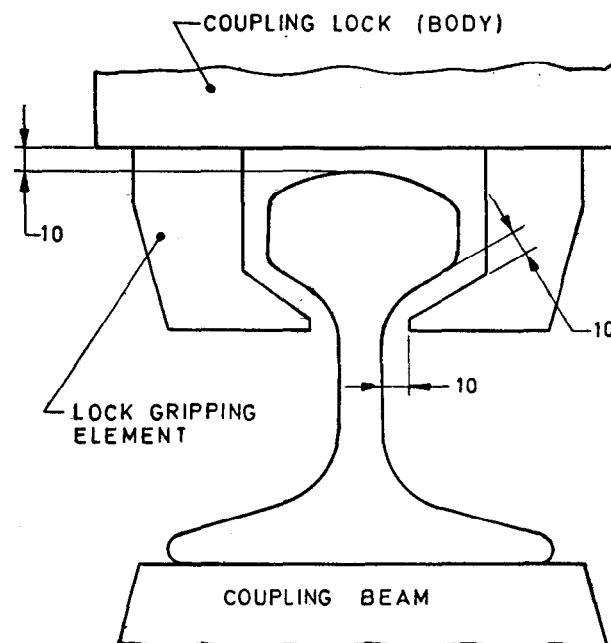
2. Dimensions

2.1 The coupling beam profile shall be as given in Fig. 1.



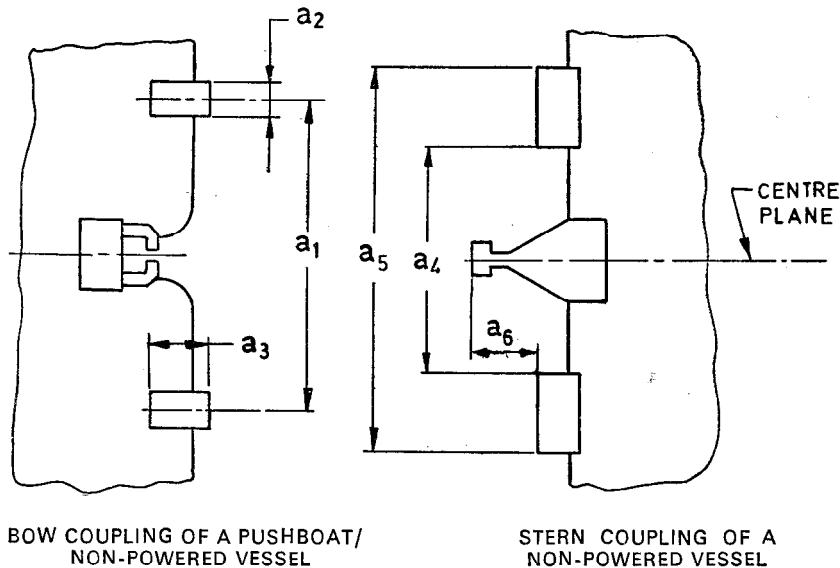
All dimensions in millimetres.
FIG. 1 COUPLING BEAM PROFILE

2.2 The connection of lock with coupling beam shall be as given in Fig. 2.



All dimensions in millimetres.
FIG. 2 CONNECTION OF LOCK WITH COUPLING BEAM

2.3 The mating dimensions of couplings shall be as given in Fig. 3.



All dimensions in millimetres.

a_1	a_2	a_3	a_4	a_5	a_6
2 500	400	415	1 900	3 100	450

Note — Dimensions a_1 and a_4 given above are the minimum possible for the bow-to-stern connection of pushboats with non-powered vessels. With the necessity of reducing external forces, an increase in dimensions a_1 and a_4 is allowed for the bow-to-stern connection of non-powered vessels by moving the rest elements to the sides, or by installing additional rest elements while retaining the possibility of connecting the pushboat to each of the non-powered vessels.

FIG. 3 MATING DIMENSIONS OF COUPLINGS

3. Materials

3.1 The coupling shall be manufactured from the materials meeting the requirements given in IS : 11694 (Part 1)-1986 'Specification for single-lock automatic couplings for push tows for inland navigation : Part 1 General requirements'.

3.2 When using a rail for the coupling beam, its material shall have the property of guaranteed weldability.

4. General Requirements

4.1 An additional reserve height $h = 600$ mm of the coupling beam and the rest elements as indicated in Fig. 4 shall be provided.

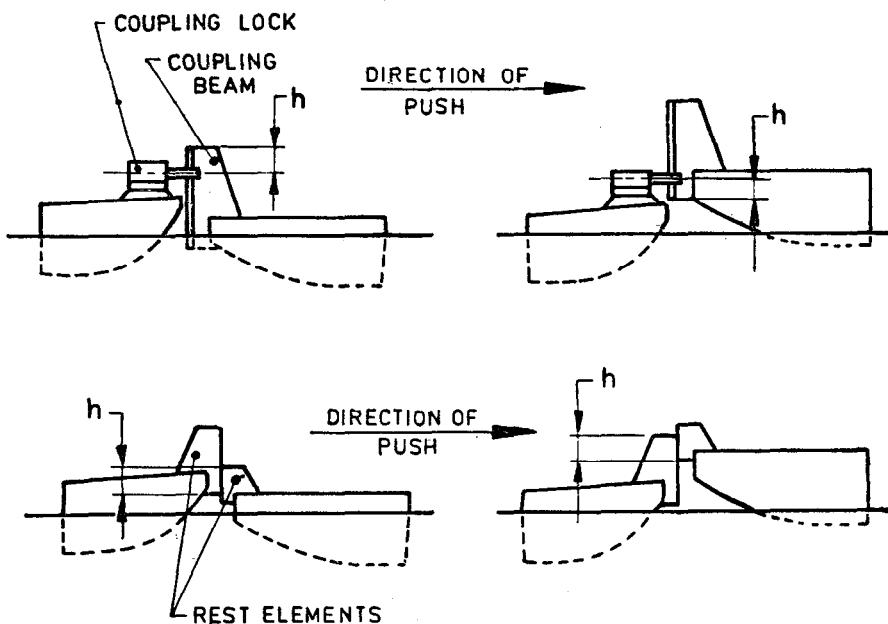
4.2 The possible ranges of the distance between the axis of the coupling lock and the water are as follows:

- a) On non-powered vessels 1·2 to 2·3 m
- b) On pushboats 1·4 to 2·0 m

4.2.1 The indicated ranges are chosen when designing the couplings depending on the depth and draught of the vessels forming push tows of the assigned tonnage.

Note — The draughts of the pushboat and the non-powered vessel shall be taken with tanks full and fully-laden respectively.

4.3 A positional adjustment of the coupling lock (or its gripping elements) in the vessel length shall be provided for in the couplings. The ranges of adjustment in relation to the initial mounting position of the couplings shall be 40 to 60 mm fore and aft.

FIG. 4 HEIGHT RESERVES (h) OF COUPLING ELEMENTS

4.4 The couplings shall be fitted with a coupling lock whose gripping elements are designed for coupling with the coupling beam made of a railway rail or other beam having a profile similar to that of a rail. Main dimensions of the section of a rail used as a coupling beam shall correspond to those indicated in Fig. 1.

4.5 The couplings shall meet all other requirements as laid down in Part 1 of this standard.

EXPLANATORY NOTE

This standard lays down the types, materials and technical requirements of the single-lock automatic couplings intended for bow-to-stern connection of vessels in push tows. The waters where these couplings are being employed should not experience a wave height of more than 2 m. This part of the standard lays down the specific requirements of Type A couplings. This standard is being issued in the following three parts:

- Part 1 General requirements
- Part 2 Type A Couplings
- Part 3 Type B Couplings

While preparing this standard, considerable assistance has been derived from ISO 7545-1983 'Shipbuilding and marine structures — inland navigation — single-lock automatic couplings for push tows', issued by the International Organization for Standardization (ISO).